# 1(CCEM)0

## Management

### (14)

### Paper—I

Time : Three Hours]  [Maximum Marks : 300

Note :— (i)  Answers must be written in English.

(ii)  Number of marks carried by each question are indicated at the end of the question.

(iii)  Part/Parts of the same question must be answered together and should not be interposed between answers to other questions.

(iv)  The answer to each question or Part thereof should begin on a fresh page.

(v)  Your answers should be precise and coherent.

(vi)  Attempt **five** questions in all.

(vii)  If you encounter any typographical error, please read it as it appears in the text-book.

1. What is Organisational Behaviour ? What are the major behavioural science disciplines that contribute to Organisational Behaviour ? What is the contribution of Hawthorne experiments to Organisational Behaviour ? What are the challenges and opportunities for managers in using organisational behaviour concepts ?  60

2. Define motivation. Identify and discuss need theories of motivation. Evaluate their applicability today.  60

3. What forces act as stimulants to change ? What forces act as sources of resistance to change ? What are the four main approaches to managing organisational change ? Is change culture bound ? Quote examples of companies in India who have developed a culture for change.  60

4. What is a monetary policy ? What are the goals of monetary policy in India ? Discuss the instruments used by the Reserve Bank of India to influence monetary conditions in the economy. What is the impact of monetary policy on enterprise decisions ? 60

5. (a) What is the role of forecasting ? Explain in detail the forecasting techniques available to managers. 40

   (b) Explain cost-benefit analysis as a project management tool. 20

6. (a) Discuss Lagrange's Multiplier method for optimization of a constrained multivariable non-linear programming problem with equality constraint. Also interpret Lagrange's multiplier. 30

   (b) Solve the following Linear Programming Problem :

   Max z $= 4x_1 + 5x_2 + 9x_3 + 11x_4$

   subject to $x_1 + x_2 + x_3 + x_4 \leq 15$

   $7x_1 - 5x_2 + 3x_3 + 2x_4 \leq 120$

   $3x_1 + 5x_2 + 10x_3 + 15x_4 \leq 100$

   $x_1, x_2, x_3, x_4 \geq 0$ 20

   (c) Give the mathematical formulation of a General Linear Programming Problem. 10

7. (a) What is the principle of duality in linear programming ? What is the significance of dual variables in a linear programming model ? What are its advantages ? 30

   (b) Solve the following transportation problem to minimize the total transportation cost and give the optimal schedule :

   **Destinations**

   | Sources | $D_1$ | $D_2$ | $D_3$ | $D_4$ | Supply |
   |---------|------|------|------|------|--------|
   | $S_1$ | 21 | 16 | 15 | 3 | 11 |
   | $S_2$ | 17 | 18 | 14 | 23 | 13 |
   | $S_3$ | 32 | 27 | 18 | 41 | 19 |
   | Demand | 6 | 10 | 12 | 15 | 20 |

(c) Explain Branch and Bound method to solve an integer programming model. 10

8. (a) The following table gives the six distribution of farms (in acres) according to percentage household and percentage land. Using the knowledge of average and dispersion, list your conclusions to compare the variability of these distributions.

   | Farm (in acres) | Percentage Household | Percentage Land |
   |-----------------|---------------------|-----------------|
   | 0-5 | 74 | 20 |
   | 5-10 | 14 | 21 |
   | 10-15 | 5 | 14 |
   | 15-20 | 3 | 10 |
   | 20-25 | 2 | 8 |
   | 25-30 | ! | 5 |
   | 30 and above | 1 | 22 |

   20

   (b) Distinguish between Correlation and Regression. 20

   (c) Write a note on components of time series. 20